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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/788,970	02/27/2004	Arkady Borkovsky	50269-0569	6826

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HICKMAN PALERMO TRUONG & BECKER LLP/Yahoo! Inc.  
2055 Gateway Place  
Suite 550  
San Jose, CA 95110-1083

EXAMINER
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LIN, SHEW FEN

ART UNIT	PAPER NUMBER
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2166

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08/05/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/788,970	<b>Applicant(s)</b> BORKOVSKY ET AL.	
	<b>Examiner</b> SHEW-FEN LIN	<b>Art Unit</b> 2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,7-11 and 17-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,7-11 and 17-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/31/2008</u> .   | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

- a. This action is taken to response to Request for Continued Examination filed on 4/16/2008.
- b. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn.
- c. Claims 1, 7-11, and 17-26 are pending in this Office Action. Claims 1 and 11 are independent claims.

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 16, 2008 has been entered.

### ***Information Disclosure Statement***

The Information Disclosure Statement(s) received on March 31, 2008 is in compliance with provisions of 37 CFR 1.97. Accordingly, the Information Disclosure Statement(s) are being considered by the examiner.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 7-8, 11, and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brett\_Tabke ("The Google FAQ by Webmasters for Webmasters", [http://referencementweb.hautetfort.com/files/google\\_kbase.pdf](http://referencementweb.hautetfort.com/files/google_kbase.pdf), 4/23/2002) in view of Bookface-ga ("Search Term Suggestion Tool available", <http://answers.google.com/answers/threadview?id=18072>, May 25, 2002), and further in view of Gravano et al. (US Patent 7,146,358, hereinafter Gravano).

**As to Claim 1**, Brett\_Tabke discloses a method for generating a list of candidate alternative spellings (page 12, suggest spelling), comprising:

finding, among a plurality of files, a first file that contains a first spelling that is also contained in a query that was entered by a user, wherein said link links to a second file (page 10, "url" search);

searching, for any spellings that satisfy particular criteria (pages 12, 19, provide alternative spelling for search term) ;

wherein said particular criteria includes that said spellings are spelled similarly to, but not exactly the same as, said first spelling (pages 12, 19, misspelled word, such as searching "hliday" and Google will present you with "holiday" and a more link);

adding, to a list of candidate alternative spellings of said first spelling, all spellings within said second document that satisfy said particular criteria (page 12, misspelling and no results, redirect to the suggested spelling, page 18, keyword suggestion);

generating a filtered list at least in part by filtering said list of candidate alternative spellings based on a comparison of (a) a first frequency of occurrences of said first spelling in said plurality of files to (b) a second frequency of occurrences, in said plurality of files, of a second spelling from said list of candidate alternative spellings; and

Brett Tabke discloses the elements of claim 1 as noted above but does not explicitly disclose generating a filtered list at least in part by filtering said list of candidate alternative spellings based on the comparison of the frequency of occurrences of first/second spelling in said plurality of files.

Bookface-ga discloses generating a filtered list at least in part by filtering said list of candidate alternative spellings based on a comparison of (a) a first frequency of occurrences of said first spelling in said plurality of files to (b) a second frequency of occurrences, in said

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plurality of files, of a second spelling from said list of candidate alternative spellings (page 1, to see first if there are not many results from the indexed list of words for each term in the query [interpreted as a first frequency of occurrences], and then secondly if there are a LOT of results for a word [interpreted as a second frequency of occurrences], in the dictionary provided by dictionary.com that is a letter or two off [it actually parses it through a suggestion dictionary, using fuzzy logic, and it may be up to three letters off if they're the right ones], and attempts to correct any misspellings. If there are 0 results for the term as is and there is a suspected misspelling, it will automatically forward to the suggested spelling link).

It would have been obvious to a person of ordinary skill in the art at the time of invention was made to modify Brett\_Tabke's disclosure to include alternative spelling based on frequency of occurrences as taught by Bookface-ga to improve search results. The skilled artisan would have been motivated to improve the invention of Brett\_Tabke per the above to provide an effective suggestion tool.

The combined teaching of Brett\_Tabke and Bookface-ga discloses storing said filtered list of candidate alternative spellings on a computer-readable storage medium (Brett\_Tabke, pages 12, 18, suggestion tool, Bookface-ga, page 1, suggestion dictionary).

The combined teaching of Brett\_Tabke and Bookface-ga does not disclose a first file that contains a link that indicates a first spelling that is also contained in a query wherein said link links to a second file and searching said second file.

Gravano discloses finding, among a plurality of files, a first file that contains a link that indicates a first spelling that is also contained in a query that was entered by a user (Fig. 5, col. 2, lines 3-5, search documents to locate one or more documents that contains anchor text that

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matches query term), wherein said link links to a second file (Fig. 5, 530, 540, col. 2, lines 6-8); searching, within said second file, for any spellings that satisfy particular criteria (abstract, Fig. 5, 540, 560, col. 2, lines 11-14, using the identified documents [said second file] to identify one of the possible translations as a likely translation of the search query, col. 6, lines 15-21, several possible translations for anchor text to be searched/matched).

It would have been obvious to a person of ordinary skill in the art at the time of invention was made to modify Brett\_Tabke and Bookface-ga's disclosure to use second document to disambiguate among the possible translations of the terms of the search query and identify one of the possible translations of search query (Gravano, col. 1, lines 55-65). The skilled artisan would have been motivated to improve the invention of Brett\_Tabke and Bookface-ga per the above to provide an effective suggestion tool.

**As to Claim 7**, Brett\_Tabke discloses the method of claim 1, wherein said first spelling comprises multiple words and wherein said second spelling comprises multiple words (Page 19, "serch engine" and "search engine").

**As to Claim 8**, Brett\_Tabke discloses the method of claim 1, wherein filtering said list of candidate alternative spellings further comprises:

in response to determining that said first frequency is greater than said second frequency, removing said second spelling from said list of candidate alternative spellings (page 12, see also Bookface-ga, page 1).

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**As to claim 11**, is directed to a computer readable storage medium carrying instructions for performing the methods of claim 1 and rejected along the same rationale.

**As to claims 17-18**, are directed to a computer readable medium carrying instructions for performing the methods of claims 7-8 respectively and are rejected along the same rationale.

Claims 9-10 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brett\_Tabke, Bookface-ga, and Gravano as applied to claim 1 above, and further in view of Chang et al. (US Patent 7,127,450, hereinafter Chang).

**As to Claims 9-10**, Brett\_Tabke, Bookface-ga, and Gravano disclose the elements of claim 1 as noted above but does not explicitly disclose filtering said list of candidate alternative spellings of said first spelling based on a whether said first spelling is a plural form of said second spelling or vice versa.

Chang discloses removing plural form from query term by normalization (Fig. 2, 44). For example, the word "computers" would have the normalized form "computer" with the plural suffix removed (col. 2, lines 48-59).

It would have been obvious to one ordinary skill in the information retrieval processing art at the time of the invention to combine the teachings of the cited references because a normalize term can be used to provide effective searching, such as to identify alternative word spelling related to the term in a directory (Fig. 9, Chang). The ordinary skilled artisan would



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have been motivated to remove the plural form of a spelling from the list to avoid the redundancy by only including distinct term in the list.

**As to claims 19-20**, are directed to a computer readable medium carrying instructions for performing the methods of claims 9-10 respectively and are rejected along the same rationale.

**As to Claims 21**, Brett\_Tabke discloses the method of Claim 1, further comprising:  
receiving, at a search engine, from said user, query terms that contain said first spelling (page 12, see also Gravano, Fig. 6, 610).

**As to Claims 22**, Brett\_Tabke discloses the method of Claim 1, further comprising:  
presenting, to said user, one or more spellings from said list (page 12, see also Gravano, Fig. 6, col. 5, lines 61-62).

**As to Claims 23**, Brett\_Tabke discloses the method of Claim 1, further comprising:  
conducting a search of said plurality of files based on a query in which said first spelling has been replaced by a spelling from said list but wherein query terms other than said first spelling remain as entered by said user (page 19); and  
presenting, to said user, one or more results of said search (page 19, see also Gravano, Figs. 3, 6, col. 5, lines 18-34, receive a search query from a user and respond by returning relevant information or a list of relevant information to the user)

**As to claims 24-26**, are directed to a computer readable medium carrying instructions for performing the methods of claims 21-23 respectively and are rejected along the same rationale.

### ***Response to Remarks***

Applicant's arguments have been fully and carefully considered but are moot in view of the new ground(s) of rejection.

### ***Related Prior Arts***

The following list of prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Moricz; Michael Z. et al., US 6411950 B1, "Dynamic query expansion".
- Decime, Jerry B. et al., US 20020194229 A1, "Network-based spell checker".

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shew-Fen Lin whose telephone number is 571-272-2672. The examiner can normally be reached on 8:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Shew-Fen Lin /S. L./  
Examiner, Art Unit 2166  
July 28, 2008

/Khanh B. Pham/

Primary Examiner, Art Unit 2166